PUBLIC OUTREACH AND EDUCATION

uccessful implementation of this *Management Plan* depends on the support of an informed, motivated public and the active involvement of the many stakeholders, interest groups, and regulatory authorities identified throughout this document. NHEP outreach activities aim to:

- Raise awareness of the ecological, recreational, historical, and economic value of New Hampshire's estuaries;
- Promote the natural resource improvements outlined in the Management Plan;
- Build a foundation of support for Management Plan implementation.



Coastal Cleanup volunteers

Most of the Action Plans presented in the Water Quality; Land Use, Development and Habitat Protection; Shellfish Resources; and Habitat Restoration chapters of this document include educational or outreach activities to aid in the successful implementation of specific actions. Outreach Action Plans specifically related to the above chapter topics are found in those chapters. General outreach and education Action Plans are found in this chapter.

The NHEP emphasizes an issues-oriented approach to public education, connecting water quality and other natural resource issues with the daily activities of people who live, work, and recreate within New Hampshire's estuarine watershed. In this *Plan*, the NHEP presents realistic, positive solutions designed to address many of the natural resource, growth, and economic problems identified for the state's estuaries. The educational messages present both the constructive and destructive influences that people living, working, or recreating in the state's estuarine watershed can have on the region's coastal character, natural resource and economic values, and the environmental condition of the estuaries.



Shellfish harvesting, septic-system maintenance, waste water treatment system investments, development pressures, road and stormwater runoff, shoreline protection and access, boat and marina impacts, and commercial and recreational fishing are just some of the human activities and related issues that have major implications for the estuaries and their management. A wide variety of audiences are interested in these issues and activities.



Summer crowds at Hampton Beach

WHY IT MATTERS

Every environmental problem threatening New Hampshire's estuaries is related at some level to human activity. Our desire to live, work, and play in unspoiled natural surroundings or near sensitive estuarine and coastal areas should motivate us to guard these precious resources. However, the popular demand for Seacoast locations and resources complicates important land use and

resource management decisions. Seacoast communities struggle to balance property-owner rights and economic development with maintaining community character, water quality, and habitat and open space.

The cumulative impacts of numerous small land use decisions can incrementally erode the local landscape, degrade water quality and habitats, and undermine the long-term economic viability of a community for the sake of short-term goals. NHEP's public outreach and education efforts aim to raise awareness about this fragile balance between growth and progress, and community character and natural resources. The NHEP Outreach Project Team wants Seacoast area residents to recognize the wealth and benefits the estuaries bring to the region and state, and the importance of responsible use and stewardship of estuarine resources. The outreach and education Action Plans are designed to help New Hampshire Seacoast communities envision a healthy environmental future for their communities and the region, and take the steps needed to ensure that future.

Beachfront development





THE CHALLENGE

The outreach and education actions of the NH Estuaries Project ask residents of the estuarine watershed to re-examine together their influences on the environmental condition of their communities and the estuaries. These activities are designed to connect natural resource conservation and management with the goals of preserving community character, ensuring sustainable economic vitality, and improving environmental conditions. Changing attitudes, and



Portsmouth Harbor

local priorities and planning procedures, is a gradual process that takes time. But time is short for the estuaries, due to the continuing pressures of growth and development in the New Hampshire Seacoast.

NHEP outreach activities aim to raise awareness of these pressures, and establish natural resource considerations as fundamental to decision-making at the individual, community, and regional levels. The New Hampshire Estuaries Project asks people and communities to consider their relationships to the natural beauty and resource wealth of the Seacoast region, and to commit to an ethic of stewardship.

Outreach Message: Shellfish Are Indicators of Water Quality

Recreational shellfishing is part of the history and tradition of coastal New Hampshire, and shellfish are an easily understood symbol of the area. Many people identify with the estuaries, beaches, and rocky shores of New Hampshire's coast, and recognize shellfish – particularly clams, oysters, and blue mussels – as characteristic features of the coastal environment. Thousands of people enjoy harvesting and eating soft-shell or steamer clams from the Hampton-Seabrook Estuary and oysters and clams from the Great Bay Estuary, but more than 50% of the state's shellfish waters are closed to harvesting.

Shellfish are a direct link between sources of fecal bacteria (e.g., wastewater treatment facilities, faulty septic systems, stormwater runoff), impaired water quality, and human health and well-being. Availability of shellfish that are safe for people to harvest and eat depends on clean water. Shellfish are also important indicators of water quality and overall health of the coastal and estuarine environments – the 'canary in the coal mine' of the estuaries. Declining shellfish populations and shellfish habitat may signal other problems in the estuarine ecosystems. Healthy, abundant populations of shellfish are also contributors to the ecological health of the estuaries by helping to filter and purify estuarine water.

For all these reasons, shellfish provide an easy-to-read yardstick for measuring the environmental quality of the state's estuaries. Safe human consumption of shellfish relies on a shellfish sanitation and management program that closely monitors shellfish-growing waters and shellfish themselves for fecal bacteria



Oyster harvesting

and other pollutants. As actions are implemented to protect and improve estuarine water quality through changes in land use or development practices, habitat protection and restoration activities, and sewage treatment upgrades, the status of the shellfisheries and shellfish resources will serve as a barometer of ecological health in the estuaries. Acreage of open shellfish beds, and health and numbers of shellfish populations, will provide a report card to the state on environmental progress in the estuaries.

Shellfish are a valuable economic, recreational, cultural, and natural resource for the Seacoast region. Several thousand New Hampshire residents enjoy harvesting shellfish. While shellfish in New Hampshire are limited to recreational harvest, with no sales permitted, the region's recreational shellfishery is worth millions of dollars annually to the local economy. Many long-time Seacoast residents who do not dig clams or tong oysters say they feel better about their communities knowing they could harvest nearby shellfish if they chose. Opening more areas to shellfishing would extend that peace of mind to still more people living near the estuaries.

Outreach Organizations

Working Together With Seacoast Communities

The New Hampshire Seacoast has a number of public outreach and education organizations committed to advancing natural resource management and conservation, and improving water quality. Representatives from the New Hampshire Estuaries Project, New Hampshire Coastal Program, NH Fish and Game Department, NH Department of Environmental Services, Rockingham and Strafford Regional Planning Commissions, and UNH Sea



Grant/Cooperative Extension have begun working together to coordinate their Seacoast outreach activities. The cooperating agencies recognize that effective coordination of their efforts can help avoid duplication and overburdening audiences.

Nearly all of the outreach organizations put local decision-makers and municipal officials at the top of their audience list. However, busy local leaders can quickly be swamped with information and demands on their time. Working effectively with this influential audience requires coordination and better understanding of the information needs of local decision-makers.

The NH Fish and Game Department and Great Bay National Estuarine Research Reserve sponsored a study to gain new insights into the information

needs of Seacoast region municipal officials. The study confirmed that planning boards, conservation commissions and planning staff are appropriate audiences for natural resource-based planning and conservation information. Survey results indicate specific education programs on estuary management and protection would be well received. But respondents also said that traditional workshops have limited appeal.

Local officials suggested information brought directly to their boards and commissions would be more likely to be considered and integrated into the planning process. Many officials preferred to receive written information, but written information must be presented in a more clear, focused, and organized manner. Municipal officials also encouraged outreach agencies to explore using electronic media to communicate information.

These comments and observations are reflected in the outreach and education actions geared to local

officials and decision-makers presented in this *Plan* (see Action LND-5). Other issues addressed throughout the *NHEP Management Plan* require different strategies with different messages intended for other important audiences. Outreach components for the shellfish actions have targeted shellfishers and shoreline property-owners (see Actions SHL-10 through 14, and EDU-4). Water quality actions are supported by outreach efforts intended to deliver information on contaminated stormwater (Actions WQ-18 and 19), wastewater treatment facilities(WQ-17), and septic system (WQ-13) issues to shoreland property-owners and municipalities, as well as to broader audiences.



Hands-on salt marsh restoration



OUTREACH WORK HAS BEGUN

The NHEP has already begun building the foundations for working with important stakeholder groups within the estuarine watershed.

The Critical Lands Analysis was an early NHEP outreach project addressing land use. Experts in Geographic Information Systems (GIS), land and habitat conservation, and water resource management, plus planning board and conservation commission members and other municipal planners contributed to this project to create a series of maps identifying high-value natural resource areas that might be especially susceptible to development pressures.

UNH Cooperative Extension educators have used products of this project extensively in GIS workshops for local officials. Critical Lands Analysis presentations and map products are continually requested and adapted for other planning purposes, such as the NH Natural Resources Outreach Coalition's presentation "Dealing With Growth." The Coalition uses the Critical Lands Analysis to create a potential development picture for interested towns, and asks the communities to integrate natural resource-based planning into the community decision-making process.

The NHEP has begun working with shoreline property owners, and has encouraged their participation in developing this *Plan*, because this important constituent group can have a major influence on the environmental condition



Results of the 1998 Advocates of the North Mill Pond CleanUp of estuarine waters and habitats. Shoreland property owners have been invited directly to all NHEP meetings, conferences, and workshops. The NHEP has provided shoreland property owners with information on sound shoreland development and maintenance practices, and with NH DES, has hosted shoreland workshops for several Seacoast communities.

During the first three years of the planning process the NHEP awarded more than \$275,000 in technical assistance grants for 27 projects (see Appendix 5). These grants were awarded to communities, citizen

groups, environmental organizations, university research, and state agencies, for water quality and habitat improvements, and for planning and outreach projects. This program has established the NHEP as a valuable partner and instrument of environmental progress in New Hampshire's Seacoast.

In July 1998, the NHEP hosted a tour of the Great Bay Estuary for local decision-makers, business people, and members of environmental organizations. The three-hour boat tour was hosted by Dr. Richard Langan, director of the UNH Jackson Estuarine Laboratory, co-director of the UNH/NOAA Cooperative Institute for Coastal and Estuarine Environmental Technology, and NHEP Management Committee Vice Chair. Response to the first tour



was so overwhelming that a second was scheduled and filled in short order. The tours were tremendous opportunities for the NHEP to showcase valuable estuarine resources and highlight NHEP projects for an audience of people who are responsible for many decisions affecting the estuary. Regional media coverage was extensive, and the NHEP demonstrated potential as a progressive force of positive environmental change in coastal New Hampshire.

The opening of the Seabrook Middle Ground clamflats in the Hampton-Seabrook Harbor in November 1998 was an early milestone of progress for NHEP outreach efforts, and drew the attention of a statewide audience. For the first time in 10 years the Middle Ground was reopened to recreational shellfishing, thanks to the work of NH Department of Health and Human Services, NH Department of Environmental Services, NH Fish and Game,

the towns of Hampton and Seabrook, volunteers from the UNH Cooperative Extension/Sea Grant Great Bay Coast Watch program, and North Atlantic Energy Service Corporation (Seabrook Station). Television viewers statewide watched a live broadcast of the event which attracted an estimated 800 shellfishers plus numerous state officials on a cold November morning. Statewide print media documented the reopening with articles, photos, and editorials acknowledging the efforts of all involved.



Clammers at the Middle Ground

Citizen Participation is Critical to the Estuaries and to the Plan

The NHEP relies on an involved public to ensure that the Management Plan and its implementation reflect their concerns. The public was invited to contribute their thoughts throughout the process of identifying priority issues and developing Action Plans. Participation in the Project Teams was open to anyone interested, and open invitations were extended at all meetings, and in all appropriate press releases and mailings. The shoreline database was used to extend personal invitations to participate in NHEP activities to that key group of estuarine stakeholders. Along with the NH Coastal Program, the NHEP hosted two NH Estuaries Environmental Network Conferences. The scientific and academic community, agency representatives, environmental organizations, and citizen groups were invited to present a "year in review" perspective of their projects and activities. The NHCP and NHEP hoped that useful interaction would occur between groups not normally in contact, but with similar missions and interests. The conferences proved quite successful with over 60 people attending each conference to hear as many as 28 presentations. The work of the New Hampshire Estuaries Project has just begun, and citizen and community support and participation are essential to meeting the ambitious goals of this Plan.



GOALS FOR PUBLIC OUTREACH AND EDUCATION

NHEP's goals for public education and outreach all aim to engage communities, government agencies, organizations, and individuals in active stewardship of estuarine resources, and participation in the *Management Plan*'s priorities and actions to protect and improve the environmental quality and character of the region.

The outreach and education goals and Action Plans reflect the Outreach Project Team's objectives. These include emphasizing a positive, issues- and solutions-based watershed approach; a focus on friendly approaches to specific groups and constituencies; and coordinated educational efforts to communicate the ecological, social, economic, historical, and cultural significance of

the estuaries. See *Appendix 3* for a complete list of goals and objectives.

- Communities, government agencies, organizations, and individuals are aware of the importance of, and participate actively in responsible use of New Hampshire's estuaries.
- Communities, government agencies, organizations, and individuals actively participate in achieving water quality-related goals for New Hampshire's estuaries.
- Communities, government agencies, organizations, and individuals actively participate in achieving land use and habitat protection goals for New Hampshire's estuaries.
- Communities, government agencies, organizations, and individuals actively participate in achieving shellfish-related goals for New Hampshire's estuaries.

PUBLIC OUTREACH AND EDUCATION ACTION PLANS

Genera	Outreach	
EDU-1	Utilize the media to enhance educational efforts.	8-11
EDU-2	Work with the Seacoast Newspapers to establish a monthly newspaper column devoted to coastal natural resource issues.	8-13
EDU-2A	Develop an agreement with Strafford County UNH Cooperative Extension to enable the NHEP Outreach Project Team to contribute coastal natural resource information to the UNH Cooperative Extension column in <i>Foster's Daily Democrat</i> .	8-15
EDU-3	Establish and fund a Technical Assistance Grant Program to promote and fund projects that support the <i>NHEP Management Plan</i> .	8-17
EDU-4	Maintain and expand the New Hampshire Estuaries Project's Shoreline Property-Owner Database.	8-19
Volunte	er Involvement	
EDU-5	Support volunteer organizations active in water quality, habitat, or other estuarine watershed natural resource issues.	8-21





Utilize the media to enhance educational efforts.



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BACKGROUND

The Seacoast region's numerous natural resource outreach and education organizations and institutions have formed the Natural Resources Outreach Coalition.* The committee was established to avoid redundant outreach and education efforts, to bring combined resources to bear on key issues where appropriate, and to evaluate the effectiveness of natural resource outreach activities in the Great Bay and coastal areas.

Volunteer groups such as Great Bay Coast Watch, advocacy groups such as Advocates of North Mill Pond, and rivers and watershed groups also provide a great deal of local environmental education related to estuarine and watershed topics.

Focusing the resources of this network to make effective, coordinated, and unified presentations to regional media outlets can increase the newsworthiness and popular appeal of estuarine and natural resource topics and events.

ACTION/ACTIVITIES

Create a coordinated approach to better utilize existing media in the following ways:

- Utilize outdoor recreation media to increase awareness of water quality, wildlife, and other natural resource issues related to shellfish and anadromous fish.
- Utilize CICEET low power radio to promote the Management Plan Actions.
- Arrange to contribute to New Hampshire Public Radio conservation programming.
- Pursue television conservation and public affairs programming.
- Continue to provide articles and information for newsletters and local print media. Submit press releases (possibly in the form of a "Report Card") highlighting improvements in the environmental condition of the estuaries and the progress of the New Hampshire Estuaries Project.



^{*}The New Hampshire Estuaries Project, New Hampshire Coastal Program, UNH Sea Grant Cooperative Extension, New Hampshire Fish and Game Department, Great Bay Estuarine Research Reserve, Sandy Point Discovery Center, Seacoast Science Center, the UNH/NOAA Cooperative Institute of Coastal and Estuarine Environmental Technologies (CICEET), and Rockingham and Strafford Regional Planning Commissions.

RESPONSIBLE PARTIES

The New Hampshire Coastal Program will take the lead in organizing coordinated use of the media. The NHEP can help with this effort. UNH/CICEET, Great Bay National Estuarine Research Reserve, UNH Cooperative Extension/Sea Grant, New Hampshire shellfish sanitation and resource management programs, and the regional planning commissions are expected to be partners in this effort.

IMPLEMENTATION LOCATION

This action will be implemented throughout the Great Bay and Coastal watersheds.

COSTS AND FUNDING

The NHCP and the New Hampshire Estuaries Project outreach program can support the cost of coordinating this Action.

REGULATORY NEEDS

None identified.

EXPECTED BENEFITS

- Increased visibility for estuarine issues
- Public communication and education about numerous water quality and natural resource topics and Plan actions.

MONITORING AND ENFORCEMENT

None anticipated.

TIMETABLE

Initiate by 2005.

PRIORITY

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High Priority. Implementation of this action is related to, but not dependent on, implementation of Action EDU-2.

Work with the Seacoast Newspapers to establish a monthly newspaper column devoted to coastal natural resource issues.



BACKGROUND

The Seacoast Newspapers have provided the NHEP considerable print media exposure over the three years of the NHEP planning process. These newspapers have expressed continued interest in coastal topics including the Coastal Clean-Up, New Hampshire shellfishing and shellfish management, and the Year of the Oceans. The New Hampshire Coastal Program has approached the Seacoast Newspapers about starting a monthly Coastal Issues column. While the editors were interested, concerns regarding submission details and long-term commitment placed the idea on the back burner.

ACTIONS/ACTIVITIES

- Build a team of writers who will draft water quality and natural resource related articles for regular submission to regional print media outlets. The NHCP can coordinate the formation of the writer team with support and participation from the other members of the Natural Resources Outreach Coalition. UNH publicists, as well as watershed and non-profit groups, will be solicited to contribute to the submission schedule.
- With the writers team in place, the NHEP is positioned to continue discussions about a monthly coastal resources column with Seacoast Newspapers. Enlisting the writers team will address many of the earlier concerns, and use the combined resources of the coastal outreach community.

RESPONSIBLE PARTIES

The NHCP will establish the writers team, develop a submission assignment list, and act as liaison with the newspaper editorial staff. The NHEP Outreach project team will take an active role in topic development and the research and writing of articles. UNH publicists, as well as watershed and non-profit groups, will be asked to contribute to the submission schedule (Step 1).

The New Hampshire Coastal Program and the NHEP can begin discussions with regional print media (Step 2).

IMPLEMENTATION LOCATION

This Action will be implemented throughout the Seacoast region communities served by the Seacoast Newspapers.

COSTS AND FUNDING

Costs will be borne within the administrative budgets of the existing Seacoast outreach organizations (Steps 1-2).



REGULATORY NEEDS

None identified.

EXPECTED BENEFITS

- Increased exposure for natural resource issues and the organizations that promote them.
- Strengthened relationships between Seacoast Newspapers and NHEP and natural resource outreach organizations.
- Natural resource issues will become a long-term media feature in the local press.
- Increased public awareness of a variety of issues related to environmental quality of life in New Hampshire's Seacoast.
- Readers receive contact information regarding particular issues.
- Readers learn about how their own actions impact the environment.
- Readers learn about natural history and opportunities to enjoy and experience the natural environment of the Seacoast.
- The *NHEP Management Plan* can be a significant source of materials for columns.

MONITORING AND ENFORCEMENT

None identified.

TIMETABLE

Initiate by 2007.



PRIORITY

Priority. Implementation of this action is related to, but not dependent on, implementation of Action EDU-1.

Develop an agreement with Strafford County UNH Cooperative Extension to enable the NHEP Outreach Project Team to contribute coastal natural resource information to the UNH Cooperative Extension column in Foster's Daily Democrat.



BACKGROUND

Strafford County UNH Cooperative Extension contributes an educational column to *Foster's Daily Democrat* on natural resources conservation and stewardship. This long-established column rotates on a five-week cycle among different Cooperative Extension programs. *Foster's* does not offer space for additional natural resource educational articles on a regular basis. If an editorial arrangement does not work out with the Seacoast Newspapers, the NHEP Outreach Team may have the option of inclusion in the rotation of the Cooperative Extension column in *Foster's*.

ACTIONS/ACTIVITIES

- If an editorial arrangement cannot be made with the Seacoast Newspapers, the NHEP Outreach Team will partner with the Great Bay Coast Watch to apply for an editorial slot in UNH Cooperative Extension's rotation.
- 2 The writing team (see Action EDU-2) and Great Bay Coast Watch will supply an article every five weeks.

RESPONSIBLE PARTIES

NHEP Outreach Project Team, Great Bay Coast Watch, and the writing team (see EDU-2) (Steps 1-2).

IMPLEMENTATION LOCATION

This Action would reach readers in the Seacoast region communities served by *Foster's Daily Democrat*.

COSTS AND FUNDING

Costs can be borne in the administrative budgets of the existing outreach organizations, as this strategy provides them with a new communication vehicle (Steps 1-2).

REGULATORY NEEDS

None identified.



EXPECTED BENEFITS

- Provide increased exposure for natural resource issues and the organizations that promote them.
- Natural resource issues will become a long-term media feature in the local press.

MONITORING AND ENFORCEMENT

None identified.

TIMETABLE

Initiate by 2007.



PRIORITY

Priority. Implementation of this action is related to, but not dependent on, implementation of Actions EDU-1 and EDU-2.

Establish and fund a Technical Assistance Grant Program to promote and fund projects that support the NHEP Management Plan.



BACKGROUND

The NHEP Technical Assistance Grant Program has been effective in improving water quality and promoting natural resource conservation and restoration, and as a valuable tool for educating the public and building local support. (See Appendix 5 for a list projects funded by these grants.)

ACTIONS/ACTIVITIES

- Establish a continuing Technical Assistance Grants program, structured similarly to previous NHEP grant programs. Emphasize projects that transfer or apply knowledge or technology on a broader basis, and that are consistent with the *NHEP Management Plan*. Develop specific review criteria to be used for funding decisions.
- 2 Grants should be awarded through a competitive process overseen by the NHEP Management Committee. (See page 10-6, Action Plan Implementation, for NHEP process to manage conflict of interest.)

RESPONSIBLE PARTIES

NHEP Management Committee in coordination with New Hampshire Coastal Program, UNH Cooperative Institute for Coastal and Estuarine Environmental Technology, and NH DES will provide input (Steps 1-2).

IMPLEMENTATION LOCATION

This Action can be implemented throughout the 43 towns, or can be focused on NHEP Zone A.

COSTS

\$50,000 to \$100,000 per year, depending on NHEP funding levels.

FUNDING

This action will be be funded with US EPA NHEP implementation funds at \$50,000/year\$ in 2001 and 2002.

REGULATORY NEEDS

None identified.



EXPECTED BENEFITS

- Projects funded through these grants result in water quality and natural resource improvements focused on the priorities and areas of particular concern outlined in the *NHEP Management Plan*
- Projects provide opportunities to communicate water quality and other natural resource messages.
- Project success stories help make environmental improvement and protection contagious.

MONITORING AND ENFORCEMENT

Funded projects should demonstrate ongoing function and water quality improvements. No enforcement is required.

TIMETABLE

This Highest Priority action will be implemented in 2001-2002.

PRIORITY

+++ Highest Priority. Implementation of this action is not dependent on implementation of other actions listed in the *NHEP Management Plan*.

Maintain and expand the New Hampshire Estuaries Project's Shoreline Property-Owner Database.



BACKGROUND

The NHEP has developed a database of contact information for all owners of tidal shoreline property in New Hampshire. This tool allows the NHEP to communicate directly with shoreline property-owners. The database currently includes all property-owners with tidal frontage in New Hampshire, plus property-owners above the head of tide on the Squamscott/Exeter River, the Cocheco River and the Oyster River. The database should be expanded to include more owners of shoreline property further up the watershed, and property-owners with frontage on the Atlantic coastline between Rye and Seabrook.

ACTION/ACTIVITIES

- The NHEP shoreline property-owner database will need continual updating and revision to remain effective. Annual corrections and additions will address real-estate transfers, tax map and data-entry errors, and new development.
- 2 Expand the database to include Atlantic coastline properties and properties with frontage on freshwater lakes, rivers, and streams within the Great Bay and coastal watersheds.

RESPONSIBLE PARTIES

The New Hampshire Estuaries Project will update and maintain the database (Steps 1-2).

IMPLEMENTATION LOCATION

This Action will expand the database somewhat beyond the Zone A tidal shorelines.

COST

Intern	\$3000/yr
Travel	\$1000/yr
Photocopying & supplies	\$300/yr

Total 4,300/yr

FUNDING

This action will be funded with US EPA NHEP implementation funds.



REGULATORY NEEDS

None identified.

EXPECTED BENEFITS

- Continuing communication capability with shoreline property-owners on water quality issues.
- A powerful tool for maintaining contact with an important group of estuarine stakeholders.

TIMETABLE

Maintenance of the database (Step 1) is ongoing. Expanding the database (Step 2) will be initiated by 2005.



PRIORITY

High Priority. Implementation of this action is not dependent on other actions listed in the *NHEP Management Plan*.

Support volunteer organizations active in water quality, habitat, or other estuarine watershed natural resource issues.



BACKGROUND

Local residents can contribute to cleaner estuarine and coastal waters through involvement in volunteer conservation, monitoring, and educational programs. Cleaner waters are vital for opening more shellfish beds to recreational harvest.

ACTIONS/ACTIVITIES

Continue to support volunteer monitoring organizations such as Great Bay Coast Watch to help build an expanded water-quality database, and to locate 'hot spots' for further investigation by the appropriate regulatory agencies. Monitoring and conservation activities also educate and empower local citizens. Informed citizens are effective educators of local officials and others on a variety of water quality topics. Specific activities could include:

- Financially assist volunteer monitoring organizations such as Great Bay Coast Watch in coastal and estuarine monitoring for water quality, harmful algal blooms, sources of pollution, and habitat description.
- 2 Train water-quality monitoring volunteers four to six times each year through workshops on specific water-quality topics and monitoring techniques. Provide for speakers and pertinent materials from other programs such as UNH/CICEET, NH DES Non-point Source Pollution Program, Great Bay Stewards, Great Bay Wildlife Refuge, etc.
- Recognize and support non-profit groups, such as Advocates of North Mill Pond and the Cocheco River Watershed Coalition, as models for non-profit community participation. Provide information on successful community partnering, fundamental organizational techniques for community-based environmental monitoring, and actions that local people can take to preserve their environment.
- 4 Engage two to three school groups a year in monitoring, habitat restoration, storm-drain stenciling, coastal clean-ups, etc. These activities provide opportunities for hands-on learning about the need for clean coastal waters and habitats.
- Assist volunteer organizations with their speaking commitments to conservation commissions and other town government bodies to explain monitoring and survey results. Train volunteers in public-speaking, interpretation of graphs, creation of maps, and current presentation technology.

RESPONSIBLE PARTIES

Great Bay Coast Watch, a Seacoast region-wide volunteer monitoring network, has already established itself as lead coordinator for citizens' water quality monitoring in the region (Steps 2, 4, and 5). Other volunteer groups



such as the Advocates of North Mill Pond and the Cocheco River Watershed Coalition draw upon the monitoring expertise and training of Great Bay Coast Watch. Other environmental organizations such as the Lamprey River Watershed Committee, the Lamprey River Advisory Board, the Strafford River Conservancy, the Exeter River Advisory Committee, and the Great Bay Stewards can be sources of significant volunteer energies and spin-off opportunities (Steps 3, 4, and 5)

IMPLEMENTATION LOCATION

This Action can be implemented throughout the Great Bay and coastal watersheds.

COSTS AND FUNDING

Volunteer monitoring program in Steps 1-2	\$10,000-15,000/yr
Volunteer education (materials, speaker fees, travel) in Step 3	300/yr
Volunteer presentations to local government in Step 5	\$1,000/yr
Support for and development of public advocacy groups in S	Step 3 \$1,500/yr
School-related environmental monitoring	
and natural resource projects in Step 4	\$2,500/yr

Total \$15,300-20,300/yr

FUNDING

Funding support for voluntary monitoring programs (Steps 1-2) has been supplied by NHEP in support of WQ-5 from 1997-2000. Support for other local organizations will be available through EDU-5 (local grants) in 2001-2002. Step 3 will not be funded with US EPA NHEP implementation funds.

EXPECTED BENEFITS

Volunteer monitoring is one of the few direct means for the citizenry of New Hampshire to participate in estuarine and shellfish management. Active citizens and students engaged in water quality monitoring or local advocacy groups bring energy, credibility, and newsworthiness to environmental projects that can help influence opinions and attitudes in coastal communities.

Volunteers engaged in environmental conservation, monitoring, and educational work make substantial contributions to raising public awareness and protecting and improving environmental quality.

MONITORING AND ENFORCEMENT

Volunteer contributions to the coastal water-quality database can be documented. The number and activity of local advocacy groups can be tracked. No enforcement activities are required.

TIMETABLE

This Highest Priority action was initiated in 1997 and is ongoing.



PRIORITY

Highest Priority. Implementation of this action is not dependent on implementation of other actions listed in the *NHEP Management Plan*.



NHEP MANAGEMENT PLAN